
FULL TEXT OF CASES (USPQ FIRST SERIES)
In re HARZA, 124 USPQ 378 (CCPA 1960)

In re HARZA

(CCPA)
124 USPQ 378

Decided Jan. 19, 1960

Appl. No. 6562

U.S. Court of Customs and Patent Appeals

Headnotes

PATENTS

1. Patentability—Adding or subtracting parts (§ 51.05)

Mere duplication of parts has no patentable significance unless new and unexpected result is produced.

Particular patents—Water Stop

Harza, Water Stop, claims 1, 4, and 5 of application refused; claims 7 to 11 allowed.

Case History and Disposition:

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Appeal from Board of Appeals of the Patent Office.

Application for patent of Leroy F. Harza (also known as Leroy Francis Harza), deceased (his sole heirs and legatees, Zelma D. Harza, Richard D. Harza, and Arthur C. Hoffman), Serial No. 558,175, filed Jan. 9, 1956; Patent Office Division 95. From decision rejecting claims 1, 4, 5, and 7 to 11, applicant appeals. Affirmed as to claims 1, 4, and 5; reversed as to claims 7 to 11.

Attorneys:

OLSON & TREXLER (ROBERT M. WOLTERS of counsel) both of Chicago, Ill., for appellant.

CLARENCE W. MOORE (D. KREIDER of counsel) for Commissioner of Patents.

Judge:

Before WORLEY, Chief Judge, RICH, MARTIN, and SMITH, Associate Judges, and KIRKPATRICK, Judge *.

Opinion Text

Opinion By:

MARTIN, Judge.

This appeal is from the decision of the Patent Office Board of Appeals affirming the final rejection of claims 1, 4, 5 and 7 to 11 inclusive, of application serial No. 558,175 filed January 9, 1956, entitled "Water Stop." Certain claims drawn to more specific structures and to the method of utilizing water stops in masonry structures have been allowed and are not involved in the appeal.

Claims 1 and 7 are representative of the appealed claims and read as follows:

1. A substantially water-tight structure of poured masonry material comprising a pair of adjacent masses of such material presenting a broad liquid confining working face and having a joint between said masses substantially perpendicular to said face, and an integral water seal of flexible material sealing said joint, said seal comprising a web lying between said masses in said joint and substantially perpendicular to said face, said web being coextensive in length with the joint, and a plurality of elongated ribs on opposite sides of said joint, said ribs being coextensive in length with said web and each rib including a neck joined to said web and an enlargement at the end of said neck remote from said web, said ribs projecting from the web a distance less than the width of the web and relatively closely spaced across the width of the web, and being flexible with the web upon relative separation of the masses but having sufficient inherent rigidity to extend into the poured material without folding thereof during pouring of the material and to be retained therein upon transverse joint separation, the longitudinal axes of said ribs extending substantially parallel to said working face whereby said web and said relatively closely spaced ribs provide a tortuous seepage path between said water seal and said masses.
7. A water stop of flexible material comprising an elongated web adapted to lie in a joint between adjacent masses of poured masonry material and having a pair of opposite faces adapted to engage such masses, and a plurality of ribs integral therewith, said ribs lying in the direction of the length of said web and being longitudinally substantially coextensive therewith, there being a plurality of parallel ribs in spaced relation to one another on each of said faces and adapted to extend into masses of poured masonry material for locking therein, each rib including a neck joint to said web and an enlargement at the end of said neck remote from said web, each rib being substantially as high as the spacing between adjacent ribs, and the ribs on said opposite faces being laterally spaced in offset relation whereby tensional forces on said ribs generally away from said web will flex said web into a zigzag shape.

It is well known that masonry masses such as concrete upon solidification and curing will contract. Therefore, were there no element present to fill the gap which forms between adjacent pours of concrete in dams, swimming pools, reservoirs, etc., those structures would be useless for their intended purposes of retaining water. It is a water stop which functions to close the gap.

The invention at bar is a water stop fabricated of a relatively flexible material such as polyvinyl chloride. It consists of an elongated web having a plurality of ribs on each side integral therewith. The ribs lie in the direction of the length of the web, are perpendicular to the surface of the web with which they are integral, and are coextensive longitudinally with the web. The ribs are spaced apart, are parallel to each other, and those on opposite sides are

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preferably laterally spaced in offset relation. Each rib includes a neck of rectangular cross section integral with the web and an enlarged portion at the end of the rib remote from the web. Preferably each rib is substantially as high as the spacing between adjacent ribs. Nailing flanges integral with the longitudinal edges of the web may also be provided.

When utilized to perform its function in a structure such as a dam, the water stop is nailed to the endpiece of the form into which concrete is poured so that the ribs on one side of the web extend into the space which will subsequently be filled with concrete. The web runs the length of the form (from top to bottom) and is perpendicular to the working face of the ultimately formed concrete masses. After the form is removed from the solidified mass of concrete, another form is built adjacent to the first concrete mass so that the ribs on the other side of the web will become buried in the adjacent pour.

As the concrete cures, it contracts and the adjacent masses separate, the enlarged end portions of the ribs which are buried in the concrete preventing the ribs from drawing out. It is clear that upon separation of the masses, the ribs must stretch. To allow the web to participate in taking up the tensional forces exerted on the ribs, the ribs and web are of equal thickness and the ribs on opposite sides are offset. This configuration upon application of tension will allow the web to assume a zigzag transverse shape.

Thus, as the concrete contracts and the gap between adjacent pours appears, water will flow into this gap and will contact the ribs. The only water which can pass from one side of the structure to the other is that which seeps between the ribs and the concrete pockets in which those ribs are located. The winding path which this water will follow in passing from rib to rib and pocket to pocket has been described by appellant as a "tortuous seepage path."

The Primary Examiner relied on the following references:

Roberts, 2,139,851, December 13, 1938.

Gardner, 2,228,052, January 7, 1941.

Schurman, 2,282,829, May 12, 1942.

The Gardner patent discloses a water stop for preventing passage of water between masses of concrete. It is an elongated strip of flexible material, such as rubber, which in cross section is in the form of a plus (+) sign, two arms of which can be considered to be a web and two of which can be viewed as ribs. The ribs on opposite sides of the web are buried in adjacent concrete masses in the same manner and relationship as are appellants' ribs, and have enlarged ends to retain them in the concrete when the masses contract and separate.

The Roberts patent relates to a joint primarily intended to replace asphalt in joints between concrete sections of highways. It shows a web and ribs, the ribs being of trapezoidal shape, the smaller base being integral with the web, the ribs on opposite sides being buried in adjacent concrete faces. The patent shows that the ribs on opposite sides may be in offset relation.

The Schurman patent has been cited to show that seals and joints in adjacent masonry sections may be of a size such that no portion of the seal extends outwardly to a working surface, in other words, the seal may be completely buried within the adjacent masses.

The Primary Examiner rejected the claims as unpatentable over Gardner in view of Roberts and Schurman. The board, in affirming the examiner, stated that the claims were unpatentable over Gardner alone and that it was not "necessary to rely on either Roberts or Schurman."

[1] Insofar as claim 1 is concerned, we agree with the Board of Appeals. The basic structure of this claim is not patentably distinguishable from that taught by Gardner. The only distinction to be found is in the recitation in claim 1 of a plurality of ribs on each side of the web whereas Gardner shows only a single rib on each side of the web. It is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced, and we are of the opinion that such is not the case here. The other limitations defined by claim 1 are manifest in Gardner. The webs are recited in the claim and as shown in the reference are similar, and the rib of Gardner, besides being "coextensive in length" with the web, has a neck and "an enlargement at the end * * * [of the neck] remote from * * * [the] web." Further, it is obvious that the ribs of Gardner extend outwardly from the web a distance "less than the width of the web," and that the ribs and web are of the claimed rigidity and flexibility.

Dependent claim 4 adds to claim 1—

* * * nailing flange means integral with the web and positioned along the longitudinal edges thereof exteriorly of a group of spaced ribs and adapted for securing to a form to seal a group of ribs on one side of the web against the material being poured.

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We find that the Gardner structure meets the claimed element. The tapered portions at the edges of the Gardner web are adaptable for use as "nailing flanges." Although the function of this means is expressed in the claim, patentability is not attained in this case by such a recitation.

Claim 5 adds to claim 4 only the limitation that the nailing flanges be "spaced inwardly of the opposed surfaces of the masses." This requires the water stop to be buried completely within the concrete masses. It is our opinion that such a feature is a modification of the Gardner structure which would be obvious to one of ordinary skill in the art. This conclusion is fortified by the Schurman patent which shows that joint seals between adjacent masonry masses may be completely embedded within them. We will sustain the rejection of claim 5.

We do not agree with the board's affirmance of the rejection of claim 7. In this claim there exists an element which is neither disclosed in Gardner nor in Gardner in view of Roberts and Schurman, and two combinations of elements which are not suggested by any combination of the references. We refer to the feature of "each rib being substantially as high as the spacing between adjacent ribs." This is novel, and its utility, as expressed by the applicant, is apparent. Further, the combination of that element and the element defined by the recitation of "the ribs on said opposite faces being laterally spaced in offset relation" is patentably distinguishable from the references. Although Roberts shows the offset positioning claimed, we believe the offsetting in combination with the claimed dimensional relationship of the ribs produces new and unobvious results which are not suggested by any combination of the references. The other combination recited in this claim which we believe patentable consists of the feature of "a plurality of parallel ribs in spaced relation to one another on each of said faces" and the element of the ribs on opposite sides being spaced in offset relation. Even though we found in considering claim 1, that the plurality of ribs is not patentable per se and have stated that Roberts shows the offsetting of the ribs, we believe the two features taken together create a patentable combination. Claims 8 and 9, being dependent upon claim 7, are therefore patentable and we reverse the board's affirmance of the rejection of these claims also.

Insofar as claim 10 is concerned, since it also recites the combination of the plurality of ribs in the offset position, we reverse the board's rejection of this claim.

Since claim 11 recites the same patentable features as claim 7, it is also allowable.

There was some discussion relative to the applicant's failure to refer specifically to the Roberts and Schurman patents in his assignments of error. In our opinion, however, the nine reasons of appeal submitted by appellant are sufficient to bring before the court all of the grounds of rejection relied on by the examiner, as well as those relied on by the board.

For the reasons above, we affirm the board's decision as to claims 1, 4 and 5, and reverse it as to claims 7, 8, 9, 10 and 11.

Footnote * United States Senior District Judge for the Eastern District of Pennsylvania, designated to participate in place of Judge O'CONNELL, pursuant to provisions of Section 294(d), Title 28, United States Code.

- End of Case -

ISSN 1526-8535

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